REMARKS

Reconsideration of the above-identified application in view of the foregoing amendment and following remarks is respectfully requested.

A. Status of the Claims / Explanation of Amendments

The Office Action rejected claims 1-4 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. [Office Action at p. 3]. The Office Action rejected claims 1-4 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,211,915 to Harada ("Harada") in view of U.S. Patent Application Pub. No. US 2002/0039144 to Yamada ("Yamada"). [Office Action at p. 2].

Claims 1-4 are pending. By this paper, claim 1 is amended to remove "to provide stable clamping operation." This amendment renders the rejection under 35 U.S.C. § 112, second paragraph, moot. Accordingly, this rejection should be withdrawn.

Claim 1 is also amended to recite, *inter alia*, "wherein the reference voltage is adjusted without transferring signal charges of the photoelectric conversion portion while charge accumulation is executed in the photoelectric conversion portion." Support for this amendment may be found throughout the application as originally filed, including at page 3, lines 1-16; page 8, lines 20-24; and page 10, lines 3-18. No new matter will be added to this application by entry of this amendment. Accordingly, Applicant respectfully requests entry of this amendment.

B. Claims 1-4 Are Patentably Distinct From Harada Alone Or In Combination With Yamada

The rejection of claim 1 is respectfully traversed. As explained more fully below, the requirements for such a rejection are not met. Specifically, Applicant's amended claim 1 recites:

> "1. An image sensing apparatus comprising:
>
> an image sensing element having a photoelectric conversion portion at which a plurality of photoelectric conversion elements are two dimensionally arrayed,
>
> vertical transfer portions which vertically transfer signal charges stored in the photoelectric conversion portion in accordance with a vertical transfer pulse,
>
> a horizontal transfer portion which horizontally transfers signal charges transferred from the vertical transfer portions in accordance with a horizontal transfer pulse, and
>
> a charge detection portion which converts signal charges transferred from the horizontal transfer portion into a signal voltage or a signal current;
>
> a switch which inputs a reference voltage from a reference power supply; and
>
> a driving circuit which, while signal charges are stored in the photoelectric conversion portion, stops the horizontal transfer portion, drains unnecessary charges generated at the vertical transfer portions of said image sensing element,
>
> wherein the reference voltage is adjusted without transferring signal charges of the photoelectric conversion portion while charge accumulation is executed in the photoelectric conversion portion, and
>
> wherein a reset of the charge detection portion by the driving circuit is continued during the draining of the unnecessary charges."

One of the aspects of the present invention is directed to adjusting a reference voltage without transferring signal charges of photoelectric conversion elements while charge accumulation is executed in the photoelectric conversion elements.

Harada is directed to a control method for reading signal obtained in light receiving portions. As Applicant understands it, however, Harada, disclosing that a signal is swept out when the amount of the signal is too large and the signal flows into a floating diffusion capacitor [Harada, col. 4, lns. 16-28, col. 4, ln. 50 - col. 5, ln. 30], does not teach, disclose, or suggest the inventive aspect of amended claim 1 as discussed above, e.g., how to adjust a reference voltage without transferring signal charges of photoelectric conversion elements while charge accumulation is executed in the photo electric conversion elements.

The Office Action admits that Harada does not teach "draining unnecessary charges from the vertical transfer portion." [Office Action at pp. 4-5]. For this element, the Office Action cites Yamada. The Office Action contends that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the charge draining of Yamada in the apparatus taught by Harada as this would allow for smear charges to be discharged resulting in less noise." [Office Action at pp. 4-5].

Yamada teaches that most noise charges are discharged to a discharge drain (45). [Yamada, para. 0277]. However, Yamada also does not teach, disclose or suggest how to adjust a reference voltage without transferring signal charges of photo electric

conversion elements while charge accumulation is executed in the photo electric conversion elements, as recited in Applicant's amended claim 1.

Accordingly, amended independent claim 1 is respectfully asserted to be patentably distinct from the cited references (i.e., Harada and Yamada), either taken alone or in combination. For at least similar reasons, dependent claims 2-4 are also believed to be in condition for allowance.

Applicant has chosen in the interest of expediting prosecution of this patent application to distinguish the cited documents from the pending claims as set forth above. These statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art.

Additionally, applicant has not specifically addressed the rejections of dependent claims 2-4. Applicant respectfully submits that the independent claim, from which they depend, is in condition for allowance as set forth above. Accordingly, dependent claims 2-4 also are in condition for allowance. Applicant, however, reserves the right to address such rejections of the dependent claims in the future as appropriate.

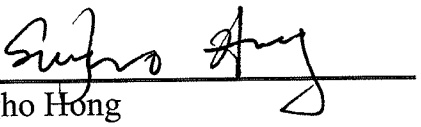
CONCLUSION

For at least the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is requested. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 1232-5209.

Respectfully submitted,
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Dated: April 11, 2008

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